

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of synthesizing a signal by a computer system comprising the acts of:

a) determining a required pitch bell location in the domain of the signal to be synthesized,

b) mapping the required pitch bell location onto an original signal to provide a first pitch bell location,

c) randomly shifting the first pitch bell location to provide a second pitch bell location,

d) windowing the original signal on the second pitch bell location to provide a pitch bell,

e) placing the pitch bell at the required pitch bell location in the domain of the signal to be ~~synthesised~~ synthesized to form

the signal, and

~~f) repeating the acts a) to e) for all required pitch bell locations of the signal to be synthesized and performing an overlap and add operation on the resulting pitch bells in the domain of the signal to be synthesized in order to synthesize the signal outputting the signal as a speech signal from a speaker.~~

2.(Original) The method of claim 1, wherein the determination of required pitch bell locations is performed by dividing the required length of the signal to be synthesized into time intervals, each of the time intervals having the length of a pitch.

3.(Previously Presented) The method of claim 1, wherein the act of randomly shifting the first pitch bell location is performed by randomly shifting the first pitch bell location within an interval of +/- the pitch.

4.(Previously Presented) The method of claim 1, wherein the act of randomly shifting the first pitch bell location i to provide

the second pitch bell location  $i'$  is performed in accordance with the following equation:

$$i' = i * (Rxp),$$

where  $R$  is a random number between  $-1$  and  $+1$  and  $p$  is the pitch.

5. (Previously Presented) The method of claim 1, wherein the windowing is performed by a sine-window.

6. (Previously Presented) The method of claim 1, wherein the windowing is performed by the following sine-window function:

$$w[n] = \sin\left(\frac{\pi \cdot (n + 0.5)}{m}\right), \quad 0 \leq n < m$$

where  $m$  is a length of the window and  $n$  is a running index.

7. (Previously Presented) The method of claim 1, wherein the original signal does not have a fundamental frequency, and the original signal comprises unvoiced speech or music.

Claim 8 (Canceled)

9. (Currently Amended) A computer system for synthesizing a signal, the computer system comprising a processor configured for:  
~~means for determining~~ required pitch bell locations within the signal to be synthesized,  
~~means for mapping~~ the required pitch bell locations onto an original signal to provide first pitch bell locations (i),  
~~means for randomizing~~ the first pitch bell locations to provide second pitch bell locations (i'),  
~~means for windowing~~ the original signal on the second pitch bell locations to provide pitch bells, and  
~~means for performing~~ an overlap and add operation with respect to the pitch bells in order to synthesize the signal.

Claim 10 (Canceled)

11. (Previously Presented) The computer system of claim 9,

wherein the means for determining determines the required pitch bell locations by dividing the required length of the signal to be synthesized into time intervals, each of the time intervals having the length of a pitch.

12. (Previously Presented) The computer system of claim 9, wherein the means for randomizing randomly shifts the first pitch bell location within an interval of +/- the pitch.

13. (Previously Presented) The computer system of claim 9, wherein the means for randomizing randomly shifts the first pitch bell location  $i$  to provide the second pitch bell location  $i'$  in accordance with the following equation:

$$i' = i * (Rxp),$$

where  $R$  is a random number between - 1 and + 1 and  $p$  is the pitch.

14. (Previously Presented) The computer system of claim 9, wherein the windowing is performed by a sine-window.

15. (Previously Presented) The computer system of claim 9, wherein the means for windowing performs windowing by the following sine-window function:

$$w[n] = \sin\left(\frac{\pi \cdot (n + 0.5)}{m}\right), \quad 0 \leq n < m$$

where m is a length of the window and n is a running index.

16. (Previously Presented) The computer system of claim 9, wherein the original signal does not have a fundamental frequency, and the original signal comprises unvoiced speech or music.

17. (Currently Amended) A device for synthesizing a signal comprising a processor ~~configure~~ configured to perform the acts of:

- determining required pitch bell locations within the signal to be synthesized;
- mapping the required pitch bell locations onto an original signal to provide first pitch bell locations;

randomizing the first pitch bell locations to provide second pitch bell locations;

windowing the original signal on the second pitch bell locations to provide pitch bells; and

performing an overlap and add operation with respect to the pitch bells in order to synthesize the signal.

18. (Previously Presented) The device of claim 17, wherein the determination of required pitch bell locations is performed by dividing the required length of the signal to be synthesized into time intervals, each of the time intervals having the length of a pitch.

19. (Previously Presented) The device of claim 17, wherein the act of randomly shifting the first pitch bell location is performed by randomly shifting the first pitch bell location within an interval of  $\pm$  the pitch.

20. (Previously Presented) The device of claim 17, wherein

the act of randomly shifting the first pitch bell location  $i$  to provide the second pitch bell location  $i'$  is performed in accordance with the following equation:

$$i' = i * (Rxp),$$

where  $R$  is a random number between  $-1$  and  $+1$  and  $p$  is the pitch.

21. (Previously Presented) The device of claim 17, wherein the windowing is performed by a sine-window.

22. (Previously Presented) The device of claim 17, wherein the windowing is performed by the following sine-window function:

$$w[n] = \sin\left(\frac{\pi \cdot (n + 0.5)}{m}\right), \quad 0 \leq n < m$$

where  $m$  is a length of the window and  $n$  is a running index.